THE SCIENCE BEHIND CACAO, COCOA AND DARK CHOCOLATE

Cocoa and Science: A Summary

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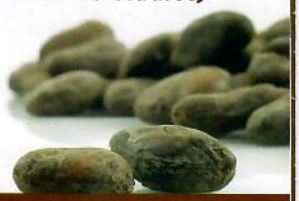
In an era of exploding scientific investigation into the effects of diet on human health, cocoa has been singled out for its promising health benefits. The cacao bean, which is borne of the Theobroma cacao tree and which forms the basis of cocoa and chocolate products, is the focus of more than 1,200 published studies to date, with other research unpublished and many more studies underway. Moreover, a large percentage of these studies are human studies, and the vast majority have been positive in their findings—both additional elements of validation for cocoa as a health-promoting food.

The following are just some of the areas of health for which cocoa has been studied, with the approximate number of studies in this area:

Antioxidant properties (more than 200 studies)
Cardiovascular health (more than 170 studies)
Diabetes (approx. 30 studies)
Brain health (more than 60 studies)
Mood (more than a dozen studies)
Cancer/cell protective properties (more than 70 studies)
Inflammation (approx. 40 studies)
Obesity (approx. two dozen studies)
Skin health (more than 30 studies)



What Kind of Chocolate is Best?

Not all chocolate is the same. Those chocolate products that use alkalized ("dutched") cocoa and that contain high amounts of sugar, oils, milk fats, and synthetic ingredients won't yield the same health benefits as healthy dark chocolate.

Because of these differences, consider the following when choosing a healthful chocolate product:

- Choose dried, not roasted, cacao beans that have been washed and thoroughly cleaned.
- Avoid chocolates that have undergone any alkalization or "dutching" processes, which can neutralize the effects of nutrients in the beans, as well as interfere with its antioxidant potential.
- The chocolate should be tested for bacteria and other infectious agents, as well as for lead.
- Processing temperature for cacao beans should not exceed 110°F.
- Look at the ingredients—a healthful chocolate product should have cocoa butter and cocoa solids as primary ingredients, not milk fats or hydrogenated oils.
- Bitter is best. Although milk chocolate isn't "bad," studies have confirmed that chocolate products with the highest antioxidant activity contain at least 70 percent pure cocoa powder.
- Cocoa that is cold-processed contains far more polyphenols (epicatechins and flavanols) than cocoa that has been roasted and heated.
- How chocolate is sweetened is another important point. Obviously, avoid products high in refined sugars. Instead, good sweetening agents include low-glycemic sugars such as unprocessed crystallized cane sugar, fructose, and agave syrup.
- Avoid products that use waxes or preservatives.

How Much Chocolate Should You Eat?

Recent studies on cacao have concluded that health benefits were obtained by consuming dark chocolate foods containing 600-900 mg of flavonoids on a regular daily basis. Flavonoids are just one of the classes of antioxidant compounds found in abundance in cacao.

All of the recent studies on cocao have concluded that health benefits were obtained by consuming high flavonoid enriched dark chocolate foods containing at a minimum of 600-1100 mg of flavonoids. The high flavonoid chocolate foods had to be consumed at least three times a day to maintain blood levels of the nutrients which provide the outstanding results. Cocoa is a mixture of flavonols, flavanols, vitamins, minerals, theobromine, tryptophan, and other bioactive nutrients which synergically maximizes one's health and prevents diseases and illnesses.